

10/510145
AMENDMENTS TO THE CLAIMS DT04 Rec'd PCT/PTO 03 OCT 2004

The listing below of the claims presents in amended form claims 1 through 9 that were approved by the International Preliminary Examination Authority and that were determined to satisfy the PCT patentability criteria in the international phase of the corresponding PCT application. Claims 10 and 11 are new claims that are also based upon the approved PCT claims. The following claims replace all prior versions and listings of claims in the present application:

Listing of Claims:

Claim 1 (currently amended): A method of producing a molybdenum-silicide-type heating element that is comprised containing essentially of molybdenum silicide type and alloys of this basic that material, characterised by said method comprising the steps of: producing a material that contains substantially Mo(Si_{1-x} Al_x)₂ and Al₂O₃ by mixing a molybdenum aluminium aluminum silicide Mo(Si_{1-y}Al_y)₂ with SiO₂, wherein the SiO₂ is at least 98% pure ; and forming a heating element from the produced material.

Claim 2 (currently amended): A method according to Claim 1, characterised in that wherein the SiO₂ is present in silicates, such as mullite and sillimanite, which do the mixture is a silicate and does not effect the affect symmetry of the crystal lattice of molybdenum silicide crystal lattice.

Claim 3 (currently amended): A method according to Claim 1 or 2,
~~characterised in that, wherein x is caused to lie lies~~ in the range of 0.4 - 0.6.

Claim 4 (currently amended): A method according to Claim 1 or 2,
~~characterised in that, wherein x is caused to lie lies~~ in the range of 0.45 - 0.55.

Claim 5 (currently amended): A method according to Claim 1, 2, 3 or 4,
~~characterised by including the step of partially substituting Re or W in the~~
~~material Mo(Si_{1-x} Al_x)₂ for molybdenum partly with Re or W in the material Mo(Si₁₋~~
~~x Al_x)₂.~~

Claim 6 (currently amended): [[A]] An electrical heating element that is
comprised substantially of the molybdenum silicide type and alloys of ~~this basic~~
~~that~~ material, ~~characterised in that~~ said element is comprised chiefly of
~~comprising~~ the materials Mo(Si_{1-x} Al_x)₂ and Al₂O₃; wherein SiO₂ having a purity of
at least 98% is added during the production process included in the material.

Claim 7 (currently amended): A heating element according to Claim 5,
~~characterised in that~~ wherein x lies in the range of 0.4 - 0.6.

Claim 8 (currently amended): A heating element according to Claim 7,
~~characterised in that~~ wherein x is caused to lie lies in the range of 0.45 - 0.55.

Claim 9 (currently amended): A heating element according to Claim 5, 6,
7 or 8, characterised in that wherein molybdenum in the material $\text{Mo}(\text{Si}_{1-x}\text{Al}_x)_2$ is
replaced partially replaced with at least one of Re or and W.

Claim 10 (new): A method according to claim 2, wherein the silicate is
mullite.